REAPING BENEFITS WITH WARFIGHTING INTEGRATION

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READABILITY BASED ON FLESH-KINCAID SCORES

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Technology is providing capabilities to operators that could never have been imagined in the past.

JARGON WATCH

- **IT**: Information Technology
- **JEFX**: Joint Expeditionary Force Experiment
- **Thumping**: When data comes in via telephone or hard-copy message and then must be input into a new system.

By Staff Sgt. C. Todd Lopez
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ARLINGTON, Va. — Over the next decade, the Air Force will continue to use information technology to leverage the capability of its people and weapons systems.

During a conference here in June, Lt. Gen. Michael W. Peterson, Air Force Chief of Warfighting Integration and Chief Information Officer, told members of the civilian information technology industry about the Air Force's success in employment of IT and its plans for the future.

General Peterson said the Air Force already had stealthy, precise weapons systems and the best Airmen in the world, but by adding IT to that mix, the service was able to make its assets more efficient and powerful. The concept of using IT to reap greater benefits from Air Force weapons and people is warfighting integration.

One example of warfighting integration is the link between ground troops and airborne intelligence, surveillance and reconnaissance platforms such as the MQ-1 Predator unmanned aerial vehicle.

"Today, (a) Soldier, Marine or an Airman on the ground can look at a terminal and watch what a Predator is observing from overhead," General Peterson said. "(They) can also talk to an AC-130 gunship. The gunship can see what is happening on the Predator. Before it even arrives on scene, the gunship has situational awareness. This has changed things dramatically."

In the past, information did not move seamlessly between sensor and operator, or computer to computer. Data had to be moved on paper or by telephone, and then keyed back into a new system — a process informally referred to as "thumping." That made for inefficiencies and inaccuracies, the general said.

The Air Force needed to find ways to move that data machine-to-machine, and take the human element out of the picture wherever possible. The general said the Air Force cannot afford to wait for data to be "thumped" into a system any longer.

"It takes too long to do that," he said. **"The moment a signals intelligence unit or sensor picks up information that something is operating in the area, it needs to be passed to the next step in the process. You have to take it to the next level."**

An example of the next level is linking ground crews to Predator aircraft and then taking the same information and linking it to warplanning and targeting systems.

"We may ask a Predator to go look at hide sites. Perhaps, we have identified potential hide sites so we know where to look," he said.

"When we find it, it's not somebody on the ground that has found the target, it's somebody back at Langley AFB (Va.) or at Beale AFB (Calif.) that actually found it. With the data processing capability we have, we know where that is on a map with enough accuracy to hand it off to an air crew to start the targeting process."

General Peterson said this kind of technology was able to help the Air Force to locate and kill al-Qaeda terrorist leader Abu Mousab al-Zarqawi in early June.

"That is exactly what happened when we went after (Zarqawi)," he said. "We knew he was in the area. Because we knew to expect that kind of target to pop up, we placed a continuous string of aircraft in motion. We could have picked any of them to go prosecute the target. That's what warfighting integration is all about, moving from a manual, step-by-step approach with seams and gaps, to a continuous flow seamlessly moving from sensing, to acquiring, to finishing the target."

Warfighting integration is also about improving processes to reduce the number of people and the amount of time needed to do a job. During the 2006 Joint Expeditionary Force Experiment, or JEFX, at Nellis AFB, Nev., the Air Force was able to use an integrated database to plan air tasking orders. Combat planners were able to complete in 4½ hours what in the past took longer than 10. These kinds of efficiencies will ultimately reduce the number of people needed to do combat support, and represent a real cost savings to the Air Force, General Peterson said.

Also at JEFX, the general said war planners were able to use network connectivity to reduce the amount of time it took to correct inaccuracies.

"In the middle of the JEFX, we (got) a chat note from somebody at Hill AFB, (Utah). He says you 'fat fingered' the fuel load for the F-16 — we'd missed a zero. At that stage in the past, it would have been too bad. We would've had to fix it on the fly."

The error would have required a series of phone calls and messages to stop the chain of events once operational decisions are made and sent out to the force. Fixing the problem could go as far as contacting those at base level locations planning tanker flights and loading fuel onto the aircraft. It could take days to complete the paperwork to correct such a mistake. And if the error had been significant, it might have meant canceling a flight.

At JEFX, the use of an integrated database meant an incorrect number could be changed immediately and the changes would cascade down through the system to all affected parties. The mistake could be corrected on the spot and the mission would never be affected.

"When we changed the fuel load on that F-16, it changed every related factor and we didn't have to go back and do anything," he said. "We published the air tasking order without making another input. No problems. That is the sort of power you find when you get everybody on the same enterprise services bus. You can see information and you don't have to guess."

Part of warfighting integration is the creation of an enterprise-wide services bus, a kind of central connecting point for all the computer-based applications the Air Force uses. By using common services — keeping shared data in the same location, or using the same name for the same piece of data in different applications — all software will be able to share information seamlessly, eliminating the need for Airmen to manually move data from one system to the next.

By integrating software solutions, the Air Force expects to reduce the number of applications it uses from 19,000 to less than 10,000 during the next seven years.

BREAKING IT DOWN

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